

WHAT IS CLAIMED IS:

1. An access-controlling method for controlling access of a terminal of an outside network to a server of an inside network using a repeater, the inside network and the outside network being relayed by the repeater, the access-controlling method comprising:

 permitting transmission of packets sent by the terminal to the server under limited conditions;

 changing conditions to generate changed conditions that define packet transmission from the terminal to the server, when the server acknowledges connection between the terminal and the server according to the packets sent under the limited conditions; and

 controlling the packet transmission from the terminal to the server under the changed conditions.

2. An access-controlling method as defined in claim 1, wherein the limited conditions limit bandwidth of the packet transmission from the terminal to the server within a predetermined range.

3. An access-controlling method as defined in claim 1, wherein the packets sent under the limited conditions include authentication information to be sent to the server.

4. An access-controlling method as defined in claim 1, wherein said changing conditions further comprises changing conditions of a flow that is defined using an address of the terminal, an port number of the terminal, an address of the server, and a port number of the server.

5. An access-controlling method for controlling access of a terminal of an outside network to a server of an inside network using a repeater, the inside network and the outside network being relayed by the repeater, the access-controlling method comprising:

 receiving encrypted packets from the terminal;

decoding the encrypted packets; and
notifying access control information concerning the encrypted packets to the repeater.

6. An access-controlling method as defined in claim 5, wherein the access control information includes information defining a flow concerning the encrypted packets.

7. An access-controlling method as defined in claim 5, wherein the access control information includes information of an address of the terminal, a port number of the terminal, an address of the server, and a port number of the server.

8. An access-controlling method as defined in claim 1, further comprising:
storing access control information in the server; and
storing the access control information in the repeater,
wherein, when the server changes the access control information, the server notifies the repeater that the access control information has changed.

9. A repeater for controlling access of a terminal of an outside network to a server of an inside network, and for relaying the inside network and the outside network, the repeater comprising:

a first communication unit operable to be connected to the outside network;
a second communication unit operable to be connected to the inside network;
a storing unit operable to store information correlatively describing a flow concerning packets transmitted via the first communication unit and the second communication unit, a bandwidth threshold value of the flow, and a measured bandwidth value of the flow;

a classifying unit operable to classify a flow of a packet according to the information defining the flow stored in said storing unit to generate a classified flow;

a measuring unit operable to measure a bandwidth of the classified flow to generate a measured value, and further operable to store the measured value into said

storing unit;

a judging unit operable to compare the measured bandwidth of the classified flow with a bandwidth threshold value of the classified flow, to judge whether or not transmission of the flow is acknowledged; and

a bandwidth control unit operable to transmit packets belonging to a flow that is judged to be acknowledged by said judging unit, via at least one of the first communication unit and the second communication unit.

10. A repeater as defined in claim 9, wherein the bandwidth threshold value of the flow stored in said storing unit is set a value that limits transmission within a limited range, until the server acknowledges connection between the terminal and the server, and

wherein, once the server has acknowledged the connection between the terminal and the server, the bandwidth threshold value of the flow stored in said storing unit is set another value that limits the transmission more loosely than the limited range.

11. A server for controlling access with a terminal of an outside network, the server connecting an inside network, the inside network and the outside network being relayed by a repeater, the server comprising:

a communication unit operable to be connected to the inside network;

a storing unit operable to store information correlatively describing a flow concerning packets transmitted via the communication unit, a bandwidth threshold value of the flow, and a measured bandwidth value of the flow;

a classifying unit operable to classify a flow of a packet according to the information defining the flow stored in said storing unit to generate a classified flow;

a measuring unit operable to measure a bandwidth of the classified flow to generate a measured value, and further operable to store the measured value into said storing unit;

a judging unit operable to compare the measured bandwidth of the classified

flow with a bandwidth threshold value of the classified flow, to judge whether or not transmission of the flow is acknowledged; and

a bandwidth control unit operable to transmit packets belonging to a flow that is judged to be acknowledged by said judging unit, via the communication unit.

12. A server as defined in claim 11, wherein a value that limits transmission within a limited range is set to the bandwidth threshold value of the flow stored in said storing unit, until said judging unit judges that transmission between the terminal and the server is acknowledged, and

wherein, when said judging unit judges that transmission between the terminal and the server is acknowledged, another value that limits the transmission more loosely than the limited range is set to the bandwidth threshold value of the flow stored in said storing unit.

13. A server as defined in claim 11, wherein, when the information stored in said storing unit is changed, said communication unit notifies the repeater that the information stored in said storing unit is changed.

14. A server as defined in claim 11, further comprising an encryption unit operable to decode an encrypted packet,

wherein said communication unit notifies access control information concerning the encrypted packet to the repeater.